

For if one link in nature's chain might be lost, another might be lost, until the whole of things will vanish by piecemeal. —Thomas Jefferson

The U.S. Fish and Wildlife Service (USFWS) manages 15 National Wildlife Refuges (NWR) and one national fish hatchery in Virginia comprising more than 161,032 acres. The refuges are managed primarily to provide habitat and to protect valuable ecosystems; however, they also provide significant outdoor recreational opportunities. Some of the refuges are grouped together into complexes with one project leader managing two or more refuges. The following discussion provides additional information about the role of the USFWS in meeting Virginia's outdoor recreation and open space needs.

Findings

- The NWR System Improvement Act of 1997 provides guidance for management and public use of the refuge system and requires each refuge in the system to prepare a comprehensive conservation plan by 2012.
- A key provision of the act defines compatible wildlife-dependent recreation as a legitimate general public use of the system and establishes the following activities as appropriate public uses: hunting, fishing, wildlife observation, photography, environmental education and interpretation.
- The refuge system helps to fulfill the following conservation objectives:
 - To preserve, restore and enhance the natural ecosystem of all species of animals and plants, including endangered or threatened species.
 - To perpetuate migratory bird resources.
 - To preserve the natural diversity of plants and animals.
 - To provide an understanding of wildlife ecology while offering refuge visitors safe, wholesome and enjoyable recreational experiences.
- Level or declining budgets for refuges nationwide, and accompanying increases in fixed costs, have caused some refuges in Virginia to reduce recreational opportunities.

Recommendations

The USFWS will coordinate and implement the following recommendations with regard to outdoor recreation and the NWRs.

- USFWS should continue to explore opportunities for partnership between the USFWS and others to provide compatible recreational and environmental education for Virginians.



Teacher Training at Presquile National Wildlife Refuge. Photo by Friends of Chesterfield's Riverfront.

- USFWS should evaluate significant areas where the USFWS can increase the availability of its resources for compatible recreational uses, especially those that are wildlife-dependent.
- The Harrison Lake National Fish Hatchery should remain in operation and sufficient funding be provided in order to maintain its important function in restoring anadromous fish to the Bay and its rivers, as well as provide public recreation opportunities.

National Wildlife Refuges and Fish Hatcheries

- USFWS should continue maintenance of the agreement allowing access through Back Bay NWR to False Cape State Park that accommodates the wildlife resources of the refuge and park visitors.
- USFWS should continue to explore opportunities to acquire additional sites along the Potomac River to help protect eagle habitat and other natural heritage resources.
- The proposed expansion of Plum Tree Island should be evaluated to possibly include public access to Back River and Lloyd Bay for fishing and wildlife observation.
- The westward expansion of Back Bay NWR should include provisions for canoeing and kayaking and bank fishing. This may be accomplished by renovating former boat ramps and through partnerships with Virginia and the City of Virginia Beach. High priority should be given to the relocation of the visitor center to the western side of Back Bay to improve accessibility to the refuge for environmental education.
- Continue to work closely with National Park Service and private partners to optimize compatible recreational opportunities at Chincoteague NWR and Assateague Island National Seashore while protecting sensitive beach habitat.

National Wildlife Refuge System Improvement Act

The National Wildlife Refuge System Improvement Act, signed into law October 9, 1997, provides guidance for the management and establishment of a national network of lands and waters deemed appropriate for conservation, and it is designed to encourage public access to the refuge system. As defined by the act, the mission of the refuge system is to *administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

A key provision of the act defines compatible wildlife-dependent recreation as a legitimate general public use of the refuge system. It also establishes the following six activities as appropriate: hunting, fishing, wildlife observation, photography, environmental education and interpretation. The act establishes a formal process for determining compatible public use and retains refuge managers' authority to use sound professional judgement in determining whether or not that use will be permitted.

The act also requires each refuge in the system to prepare a comprehensive conservation plan within 15 years after passage of the bill and to allow for active public participation during the preparation and revision of the plan.

Conservation objectives

The refuge system helps to fulfill the following conservation objectives: 1) to preserve, restore and enhance the natural ecosystem of all species of animals and plants, including endangered or threatened species; 2) to perpetuate migratory bird resources; 3) to preserve the natural diversity of plants and animals; and 4) to provide an understanding of wildlife ecology while offering refuge visitors safe, wholesome and enjoyable recreational experiences. Planning for priority public uses should be based on the capacity of an area to provide a quality experience, not its ability to accommodate quantity.

Funding

While refuges in Virginia have enormous potential to provide additional high quality wildlife-dependent recreational opportunities, the federal budget for the NWR system will likely remain level, at best, over the next several years. With salaries, fuel and other fixed costs rising, a level budget results in a decreased ability to conduct necessary wildlife and habitat management activities. Three refuges in Virginia (James River, Plum Tree Island and Presquile) have been placed in preservation status, meaning that they will be minimally staffed and limited in the types and amounts of recreation they provide. USFWS will seek to invigorate existing partnerships and develop new ones to meet the challenges created by declining budgets. However, it is certain that refuge visitors will witness some declines in the type and amount of available recreational opportunities over the next several years.

National Wildlife Refuges in Virginia

For the location of these refuges see Map IX-2.

Great Dismal Swamp and Nansemond National Wildlife Refuges

The Great Dismal Swamp NWR, established 1974, lies in southeastern Virginia and northeastern North Carolina. The seasonally flooded wetlands consist of more than 111,200 acres. Lake Drummond, which is 3,100 acres and one of only two natural lakes found in Virginia, lies in the center of refuge. The refuge was

established to restore and maintain the historical natural biodiversity of the Great Dismal Swamp.

Habitat management issues include restoration of the globally rare Atlantic white cedar forest and conservation and management of the water resources, which are vital to the native wildlife and varied plant communities of a swamp ecosystem.

A variety of wildlife-dependent recreational opportunities are available on the refuge including hunting, fishing, wildlife observation, interpretation, wildlife photography and environmental education. Hiking, biking, boating and vehicular access help to facilitate these uses. Current resources include more than 80 miles of trails for hiking and biking, with most use focused at the Washington Ditch and Jericho Lanes entrances where parking is available. An auto tour to Lake Drummond is available with a special day pass from the refuge headquarters during business hours.

The refuge's comprehensive conservation plan calls for expansion of the public use program. Among other additions, a new visitor center is planned for the abandoned Highway 17 corridor in Chesapeake and a visitor services center and environmental education pavilion in Suffolk. The plan will also add an annual bear hunt to the refuge's hunting opportunities.

The Nansemond NWR, a satellite facility of the Great Dismal Swamp Refuge, is approximately 423 acres of marshland transferred from the U.S. Navy through the surplus property program. The facility is closed to public use.

Back Bay National Wildlife Refuge

In 1989, the USFWS received approval to expand the Back Bay NWR to the north and west of Sandbridge and along the western shore of Back Bay. When complete, the 6,340-acre expansion will provide additional protection for the marshes and fastlands (uplands above the high water mark) surrounding Back Bay and help to initiate the recovery of this important resource. Acquired acreage in 2006 was 9,102 acres. This refuge has an extensive environmental education program that promotes appreciation for the resource and provides some appropriate public use of these federal lands. In 2005, 4,889 school children participated in outdoor classroom activities at the refuge. After acquiring the lands from willing sellers, the USFWS will evaluate the suitability of these areas for incorporating compatible recreational opportunities. Among the facilities under consideration are water access points, fishing areas, wildlife observation decks, trails and environmental education centers.

A key issue concerning Back Bay NWR is the matter of access to False Cape State Park through the refuge. It is extremely important that the agreement be maintained, which allows access to False Cape State Park to accommodate park visitors and the wildlife resources of the refuge. The final Memorandum of Understanding related to park access was completed in the fall of 1996. Continued monitoring of that access will allow for enhanced educational and recreational opportunities at one of Virginia's most unique parks.

Mackay Island National Wildlife Refuge

Mackay Island NWR is located on the north side of Currituck Sound, straddling the Virginia-North Carolina border. The refuge was established to provide wintering habitat for greater snow geese and other waterfowl and now totals 8,024 acres. Of this, 824 acres are in Virginia. Recreational opportunities include wildlife observation, wildlife photography, deer hunting and fishing.

Chincoteague National Wildlife Refuge

Chincoteague NWR, one of the country's most-loved refuges, receives more than 1.4 million visits each year from people from all 50 states and numerous foreign countries. Visitors are treated to abundant bird and other wildlife, pristine beaches, accessible trails, and a variety of interpretive and educational programs. The state-of-the-art Herbert H. Bateman Educational and Administrative Center is equipped with 5,000 square feet of interactive exhibits, an auditorium, classroom and sales outlet. The center is an exemplary building for environmentally friendly construction. In addition, the refuge provides opportunities for the public to enjoy wildlife-dependent recreation, including hunting and fishing.

Featuring more than 14,000 acres of beach, maritime forest, and freshwater and saltwater wetlands, Chincoteague Refuge manages this unique barrier island ecosystem to allow many species of wildlife to co-exist. Originally established in 1943 for the greater snow goose, the refuge's scope of work has broadened to include the more than 320 species of birds that are known to occur on the refuge along with other native plants and animals. Several threatened and endangered species, including the endangered Delmarva Peninsula fox squirrel and the threatened piping plover, benefit from the refuge's management activities.



Wetlands at the Eastern Shore of Virginia National Wildlife Refuge.
Photo by Virginia Witmer/Virginia CZM Program.

Eastern Shore of Virginia and Fisherman Island National Wildlife Refuges

Eastern Shore of Virginia NWR was established in 1984 when the USFWS obtained the old Cape Charles Air Force Base. This 1,123-acre refuge is located at the southern tip of the Delmarva Peninsula and is a hemispherically important stopover area for migrating neo-tropical bird species. The USFWS, with its partners (Virginia, local governments and the private sector) are identifying critical areas for habitat conservation in Northampton County.

The refuge has a state-of-the-art visitor center, interpretive trails that include an historic coastal artillery site, wildlife observation areas and a photography blind. There is big game hunting for deer during the Virginia archery and gun seasons. The refuge participates in a number of local festivals including the Eastern Shore Birding and Wildlife Festival. The refuge has been identified as an anchor site in the *Birdwatcher's Guide to Delmarva*. It is also a site for the Virginia Coastal Birding Trail, and has been designated as an Important Bird Area by the National Audubon Society.

Fisherman Island NWR was established in 1969 and has been managed by the Eastern Shore of Virginia National Refuge since 1984. This 1,850-acre refuge is a stopover area for neo-tropical bird species during

spring and fall migrations, and is a major nesting site for American oystercatchers, brown pelicans and other beach nesting birds. The refuge is closed to the public due to the sensitive habitat, but guided tours are conducted during the non-nesting season.

Eastern Shore of Virginia and Fisherman Island refuges completed their Comprehensive Conservation Plan in 2004, in accordance with the 1997 Refuge Improvement Act. Public involvement occurred throughout the process. The plan contains recommendations for enhanced, wildlife-dependent, public recreational and educational opportunities.

Eastern Virginia Rivers National Wildlife Refuge Complex

In September 2000, James River, Presquile and Rappahannock River Valley NWRs were administratively consolidated as the Eastern Virginia Rivers NWR Complex. Plum Tree Island, formerly administered from Back Bay refuge, was added to the Eastern Virginia Rivers Complex in 2003. The headquarters for the complex is located in Warsaw, Virginia.

Presquile NWR is a 1,329-acre island in the James River, in the northeast corner of Chesterfield County. Historically, a USFWS-operated ferry provided access for pre-scheduled groups to view wildlife, enjoy the 0.75-mile interpretive trail and participate in a limited deer-hunting program. In 2001, concern for visitor safety prompted the USFWS to discontinue use of the ferry for visitor transportation. In 2006, the refuge was placed in preservation status due to budget constraints. Some limited public use may still be available during pre-scheduled special events, and a pontoon boat is available on those occasions for visitor transportation. The refuge deer hunt will continue, but no hunter transportation will be provided.

James River NWR, established in 1991, currently consists of approximately 4,300 acres of primarily forested habitat in Prince George County. The refuge and surrounding area supports one of the largest summer juvenile bald eagle concentrations in the east. Visitor and education facilities that were proposed in a 1991 station management plan will be re-evaluated during the comprehensive conservation plan process, scheduled to begin in 2009 (along with Presquile). James River refuge has also been placed in preservation status due to declining budgets. The refuge will remain open for limited deer hunting during the shotgun season, but no other visitor services are currently being planned.

Rappahannock River Valley NWR was established in 1996 along a 50-mile stretch of the lower portion of the river and includes parts of seven riverfront counties. The refuge currently contains nearly 7,800 acres with a protection target of 20,000 acres. Refuge wetlands and associated uplands provide critical habitat to a variety of plants, migratory birds, fish and other wildlife, including the threatened bald eagle and sensitive joint vetch. The refuge's Wilna Tract is open daily for freshwater fishing, photography and wildlife observation, and several tracts are open for public deer hunting in the fall. Three other refuge properties are open for wildlife observation by advanced reservation. The refuge began preparation of its comprehensive conservation plan in late 2005, with a scheduled completion date of mid-2007.

Plum Tree Island NWR in Poquoson is an extensive marsh system of more than 3,500 acres. The island was formerly an Air Force bombing range, which, because of potential hazards, is not available for public use. A boundary expansion in 1994 created the opportunity to acquire additional lands to the west of Plum Tree Island. New acquisitions would afford additional habitat protection and could provide opportunities for public hunting and wildlife observation. The 225-acre Cow Island Tract, acquired in 1996, was not part of the bombing area and is open for waterfowl hunting by permit. Plum Tree Island has also been placed in preservation status.

Potomac River National Wildlife Refuge Complex

Potomac River NWR Complex includes the Mason Neck NWR, Occoquan Bay NWR and Featherstone NWR. The three refuges comprise 3,247 acres located near the confluence of the Occoquan and Potomac rivers, 20 miles south of Washington, D.C.

Mason Neck NWR is located in Fairfax County and consists of 2,277 acres of mature oak-hickory forest, freshwater marshes, and 4.4 miles of shoreline. Mason Neck was established in 1969 as the first federal refuge preserved specifically for the protection of nesting, feeding and roosting habitat for the bald eagle. Seven bald eagle nests occur on or near the refuge, which has a wintering population of 60 eagles. One of the largest great blue heron rookeries in the Mid-Atlantic area (more than 1,400 nests) is located on the refuge. The refuge has more than 3.5 miles of hiking trails including the three-quarter-mile Great Marsh Trail which is paved and meets standards set

aside by the Americans with Disabilities Act (ADA). In addition, there is the three-mile hiking and biking trail known as High Point Trail connecting Gunston Hall, the refuge and Mason Neck State Park. High Point Trail also meets ADA standards. In cooperation with the adjacent state park, the refuge has a managed deer hunt each fall.

Occoquan Bay NWR was established in 1998 through the transfer of the Army's Woodbridge Research Facility to USFWS. Occoquan Bay NWR consists of 644 acres of native grassland, forest and tidally influenced marsh and wetlands. The unique variety and location of habitats on this relatively small refuge provides outstanding birding opportunities. The bird species list exceeds 220. Refuge management focuses on grasslands and grassland nesting birds. The refuge has six miles of hiking trails and roads and an auto tour loop. Future plans include an office and visitor center complex. The refuge has a managed deer hunt, and in cooperation with the Virginia Department of Game and Inland Fisheries, hosts a deer hunt for youth hunters.

The staff of the refuge complex also manages the 325-acre Featherstone NWR. Located near the confluence of Neabsco Creek and the Potomac River, this refuge currently has no public access.

Harrison Lake National Fish Hatchery

In 1992, the USFWS entered into an agreement with Charles City County, DCR and other state agencies to explore providing additional opportunities for recreational and environmental education at the Harrison Lake National Fish Hatchery. As part of the challenge grant, the USFWS permitted construction of barrier free recreational fishing and picnic areas. This construction included two fishing piers, a boat dock, wheelchair-accessible asphalt paths and parking area, and six picnic tables, two of which are also wheelchair-accessible. In addition, a watchable wildlife area has been established, and a nature trail extension was made. These projects, most of which were cost-shared by state and local agencies, were found to be compatible with the mission of the hatchery and resulted in only minor environmental disturbance. Plans for additional facilities are dependent on funding, compatibility with the mission of USFWS and Harrison Lake National Fish Hatchery, and environmental considerations. Any additional facilities constructed will be accessible in accordance with the Americans with Disabilities Act.